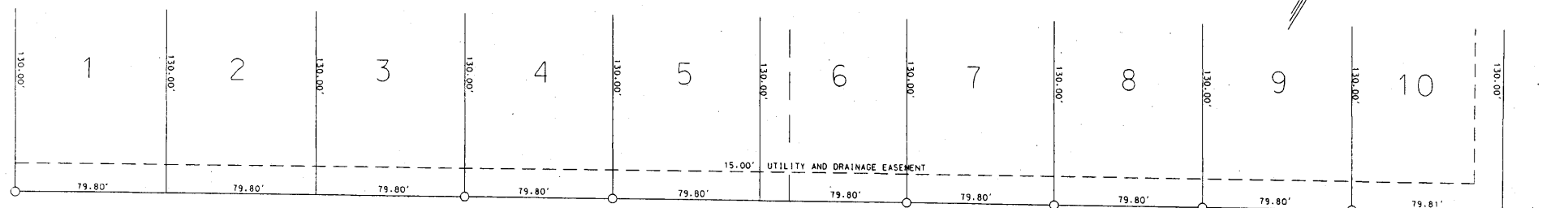


GRAPHIC SCALE IN FEET

OVERALL PLAN VIEW

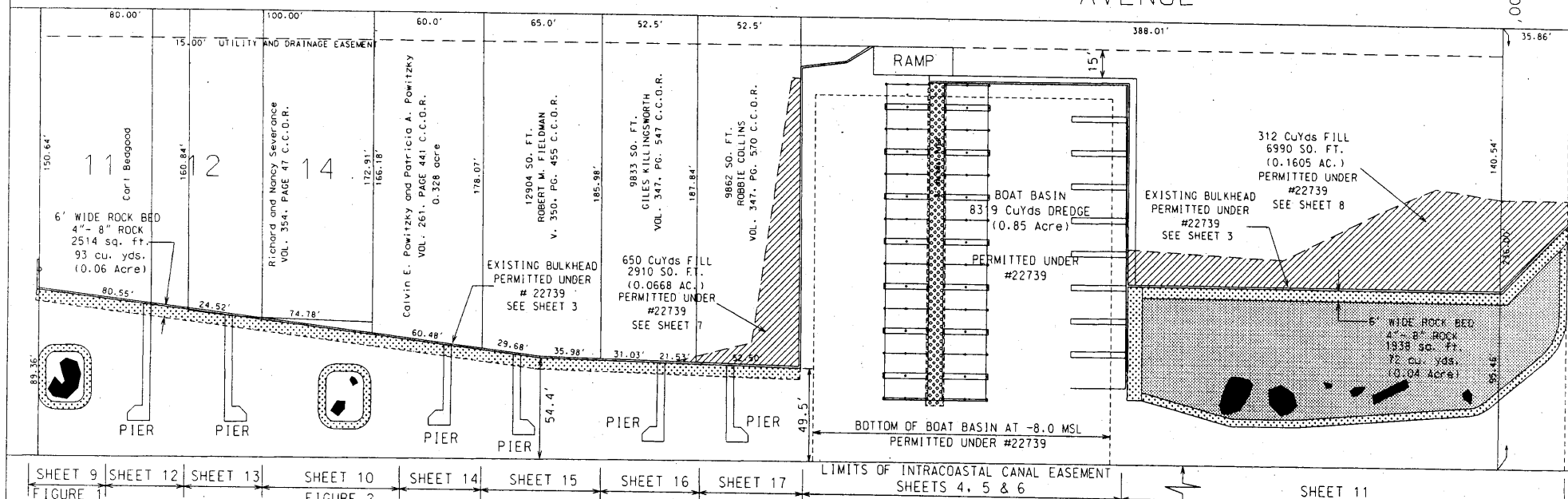


0 80 160 240



STELLA

AVENUE



Larry's Harbor
22739(01)
Sheet 2 of 18

LEGEND

- EXISTING VEGETATION (0.02 acre total)
- PROP. NEW PLANT VEGETATION - SMOOTH CORD GRASS (0.28 acre total)
- PROP. 4" - 8" ROCK (0.14 acre total)
- PROP. BASE SUBSTRATE - CRUSHED ROCK OR SHELL (0.04 acre total)
- FILL AREA (0.55 acre total)

SEE SHEET 18 FOR
QUANTITY SUMMARY

LARRY'S HARBOR BOAT BASIN PROJECT

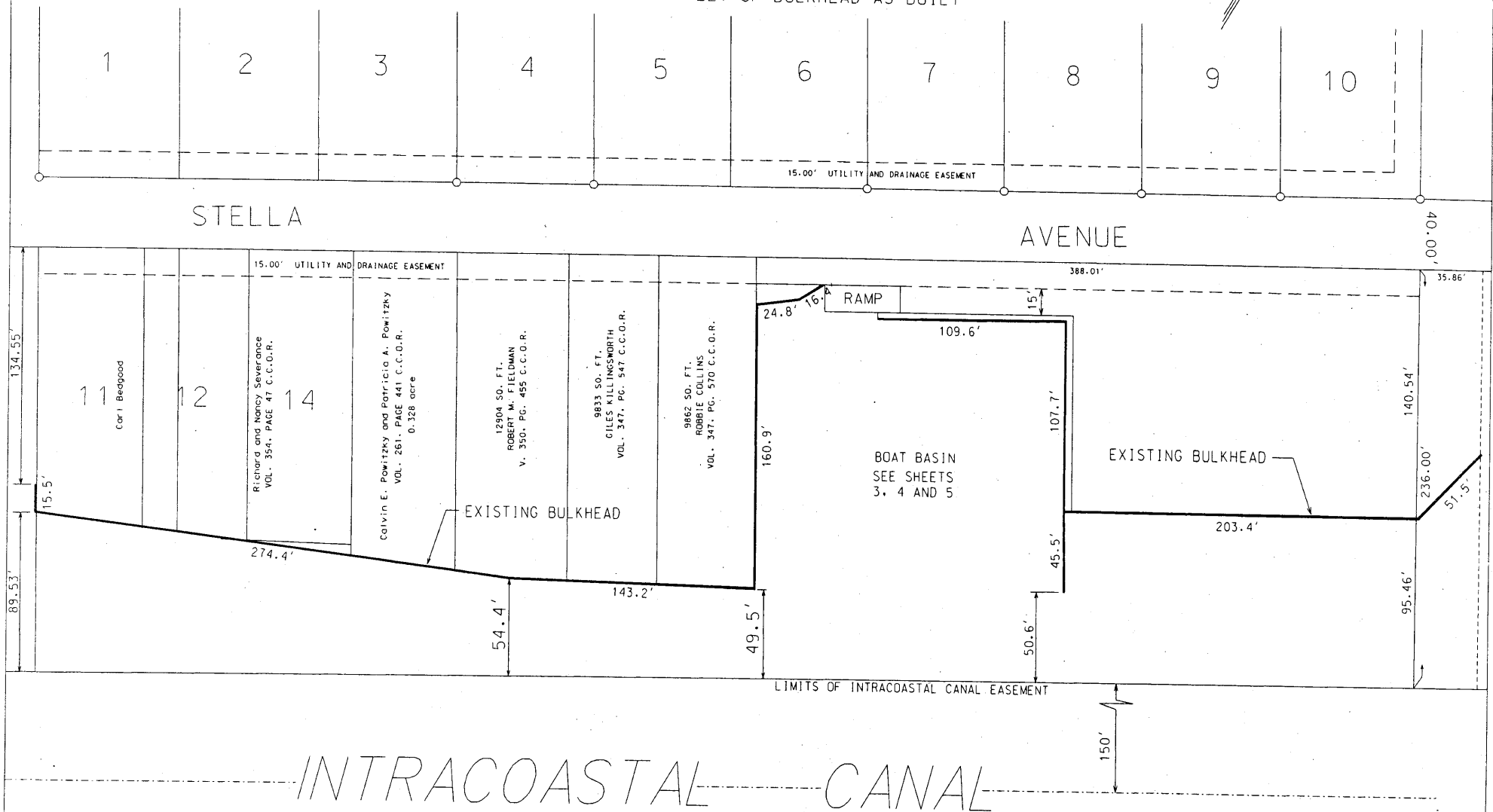
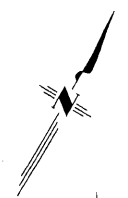
DATE: JANUARY 30, 2004

SCALE: AS SHOWN

S12734
SHEET 2 OF 18

BULKHEAD AS-BUILT PLAN

PERMITTED UNDER #22739
1252.9 LINEAR FEET OF BULKHEAD AS-BUILT



GRAPHIC SCALE IN FEET



Larry's Harbor
22739(01)
Sheet 3 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

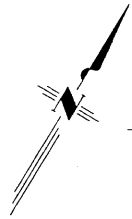
DATE: JANUARY 30, 2004

SCALE: AS SHOWN

S12734
SHEET 3 OF 18

BOAT HARBOR AND PIER PLAN

PERMITTED UNDER # 22739



STELLA AVENUE (40' R.O.W.)

A

SEE SHEET 5 FOR
CROSS SECTION A-A

15' DRAINAGE AND UTILITY EASEMENT

RAMP

5' CONCRETE WALK

1725 sq. ft x 9" thick
48 CU. YDS
BASE SUBSTRATE
CRUSHED ROCK OR SHELL
PERMITTED UNDER
•22739

169.50'

3'

47'

12'

24'

24'

14 COVERED BOAT STALLS

14 COVERED BOAT STALLS

32.7'

A

8' WIDE ROCK BED
4"-8" ROCK
488 sq. ft.
18 CU. YDS

162.60'

46'

30'

9 BOAT STALLS

3'

18'

8' WALKWAY PIER

EXISTING BULKHEAD
PERMITTED UNDER •22739
SEE SHEET 2

EXISTING BULKHEAD
PERMITTED UNDER •22739
SEE SHEET 3

OUTBLOCK

45

LIMITS OF INTRACOASTAL CANAL EASEMENT

150'

INTRACOASTAL CANAL

CENTER OF
CANAL

GRAPHIC SCALE IN FEET



0 40 80 120

Larry's Harbor
22739(01)
Sheet 4 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

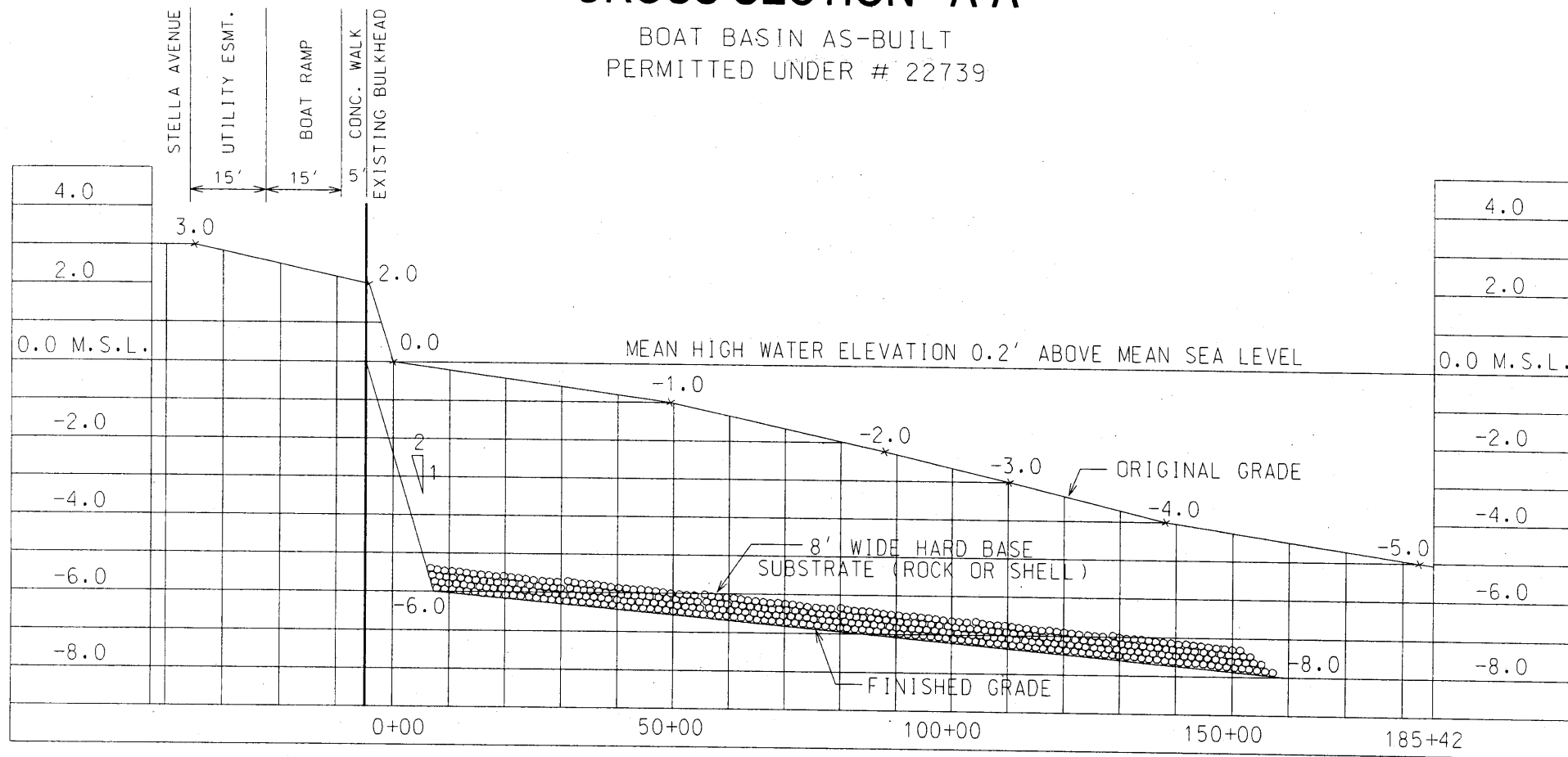
SCALE: AS SHOWN

S12734

SHEET 4 OF 18

CROSS SECTION A-A

BOAT BASIN AS-BUILT
PERMITTED UNDER # 22739



HORIZONTAL
GRAPHIC SCALE IN FEET



VERTICAL
GRAPHIC SCALE IN FEET



Larry's Harbor
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Sheet 5 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

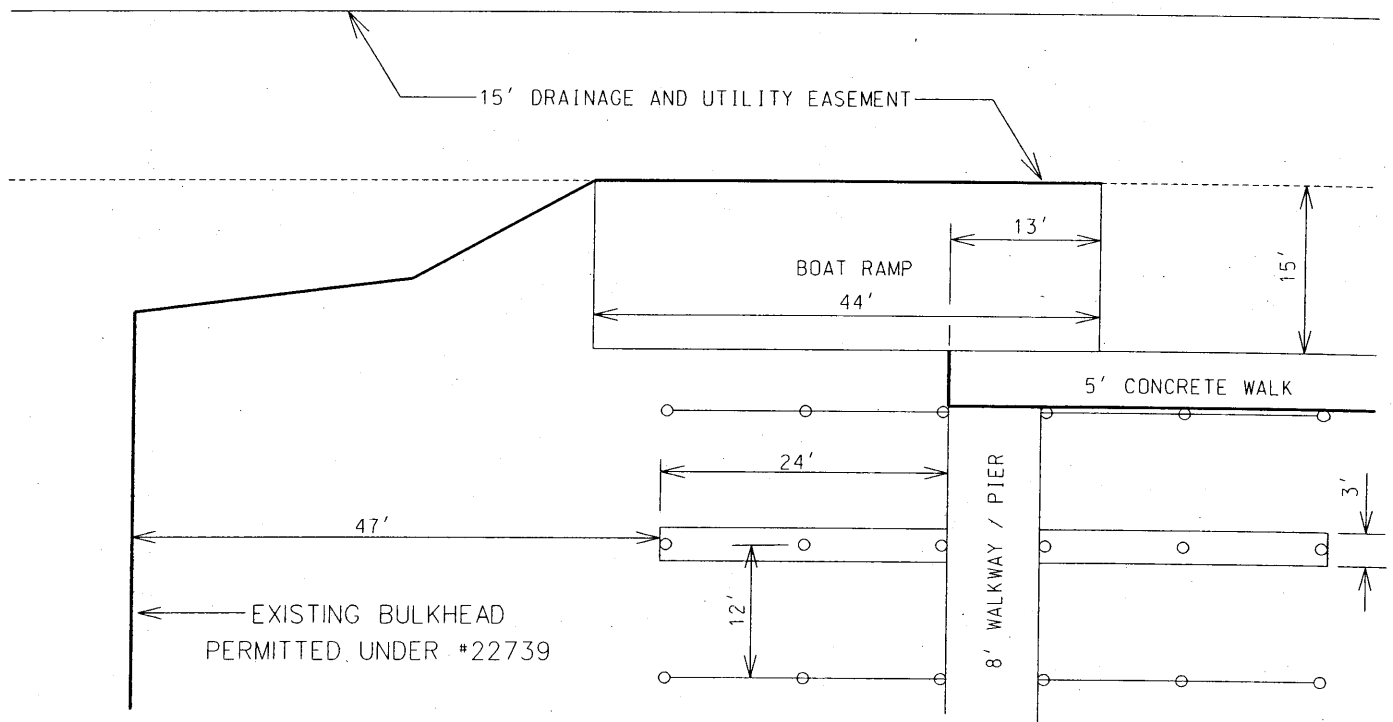
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S12734
SHEET 5 OF 18

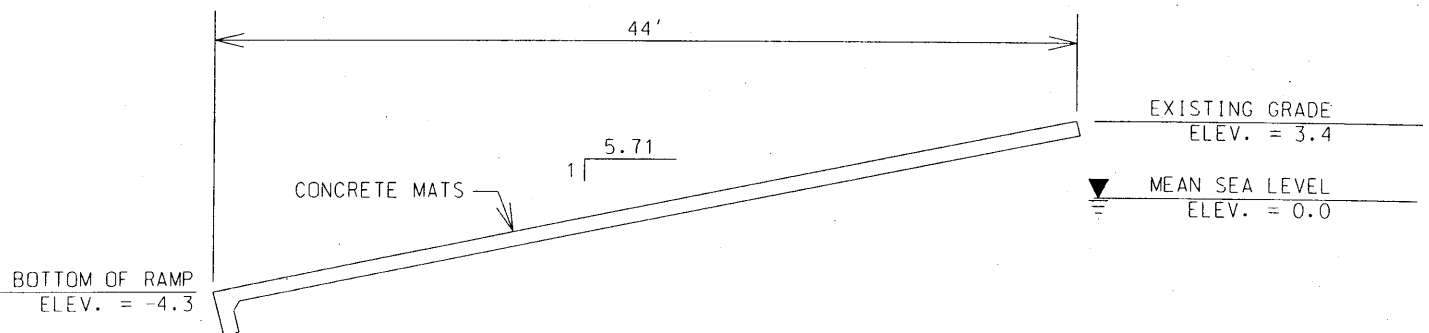
BOAT RAMP DETAIL

PERMITTED UNDER # 22739

STELLA AVENUE (40' R.O.W.)



BOAT RAMP PROFILE



Larry's Harbor
22739(01)
Sheet 6 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

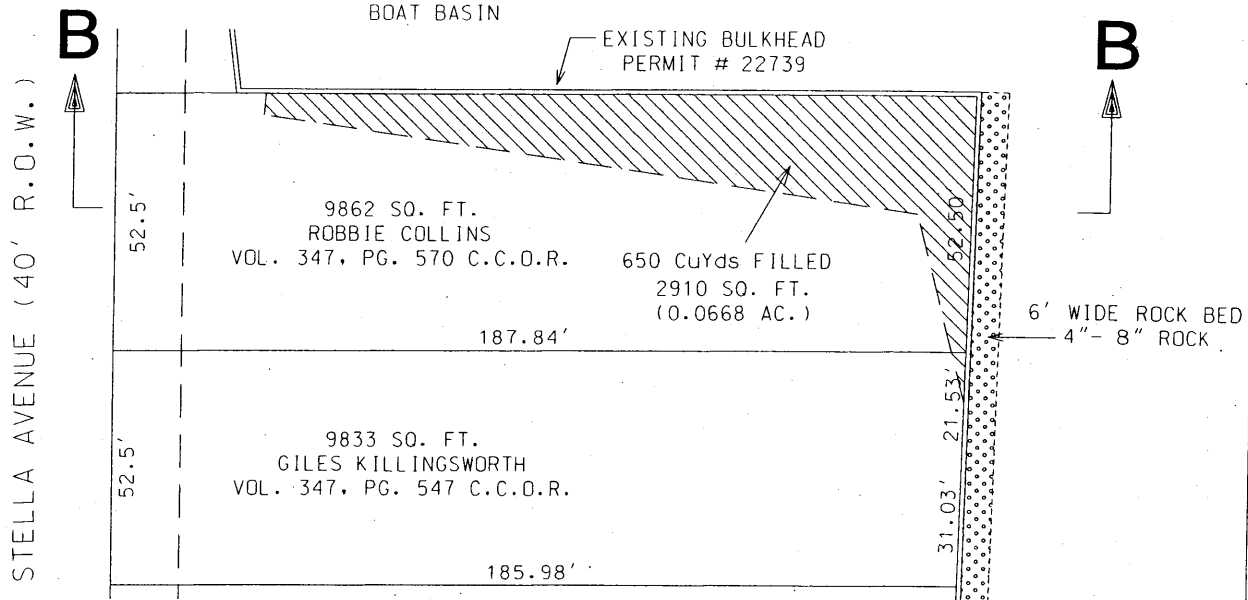
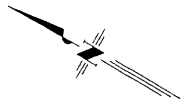
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S12734

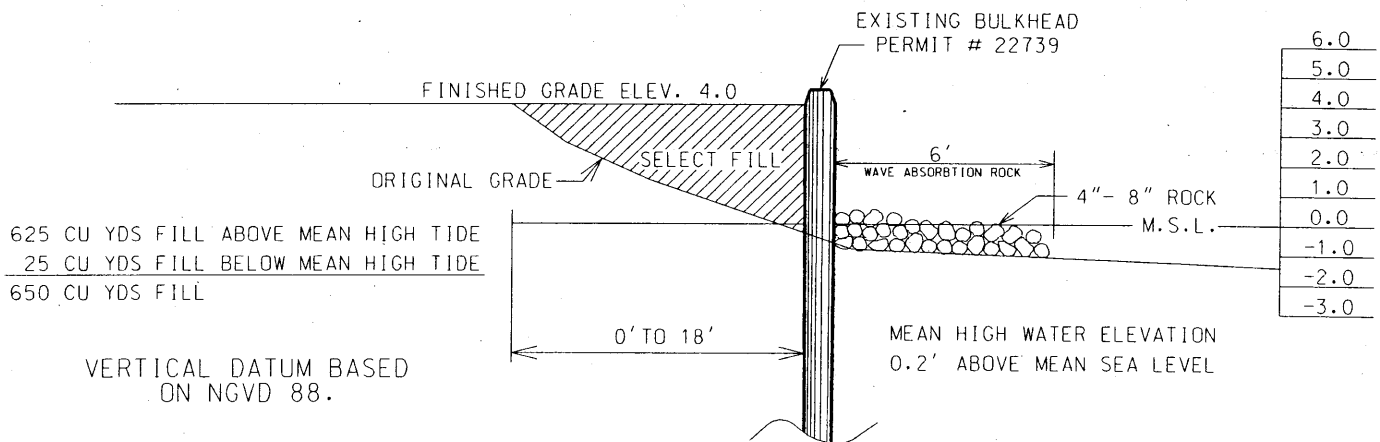
SHEET 6 OF 18

ALREADY CONSTRUCTED AND AUTHORIZED UNDER PERMIT # 22739

TYPICAL BULKHEAD END VIEW WEST OF BOAT BASIN



CROSS SECTION B-B



HORIZONTAL
GRAPHIC SCALE IN FEET



VERTICAL
GRAPHIC SCALE IN FEET



Larry's Harbor
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LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

S12734

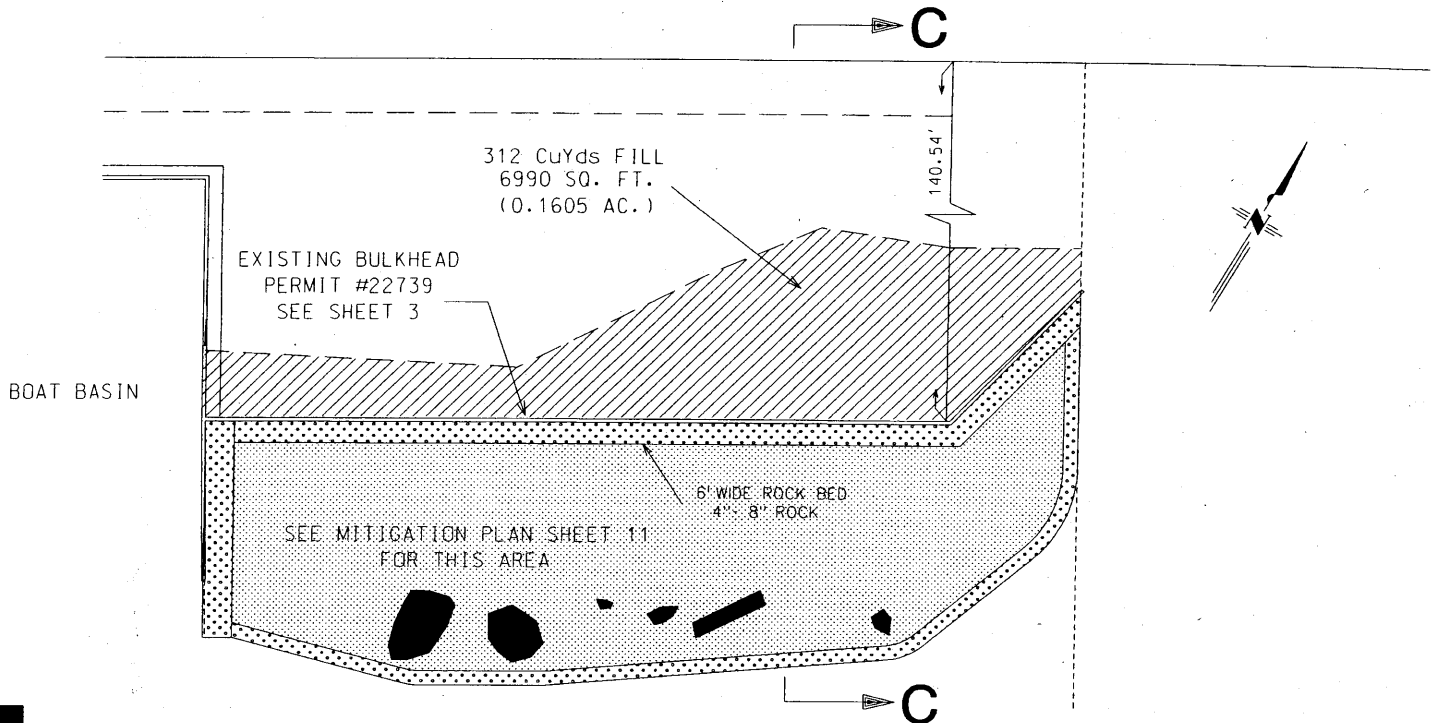
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SHEET 7 OF 18

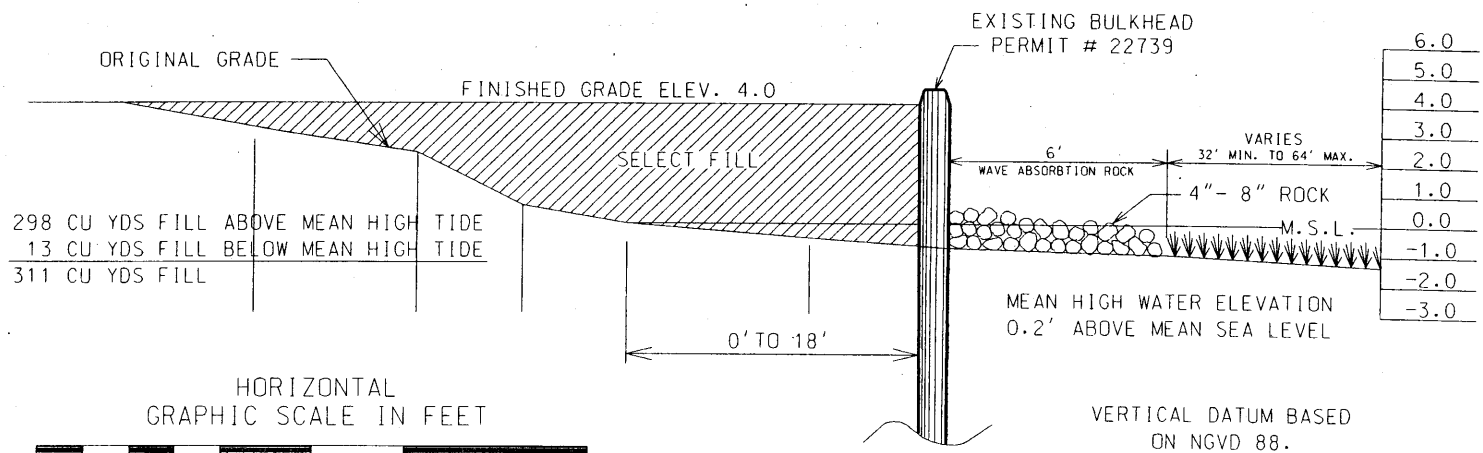
ALREADY CONSTRUCTED AND AUTHORIZED UNDER PERMIT # 22739

TYPICAL BULKHEAD END VIEW EAST OF BOAT BASIN

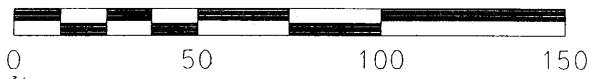
STELLA AVENUE (40' R.O.W.)



CROSS SECTION C-C



HORIZONTAL
GRAPHIC SCALE IN FEET



VERTICAL
GRAPHIC SCALE IN FEET



Larry's Harbor
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Sheet 8 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

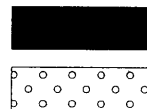
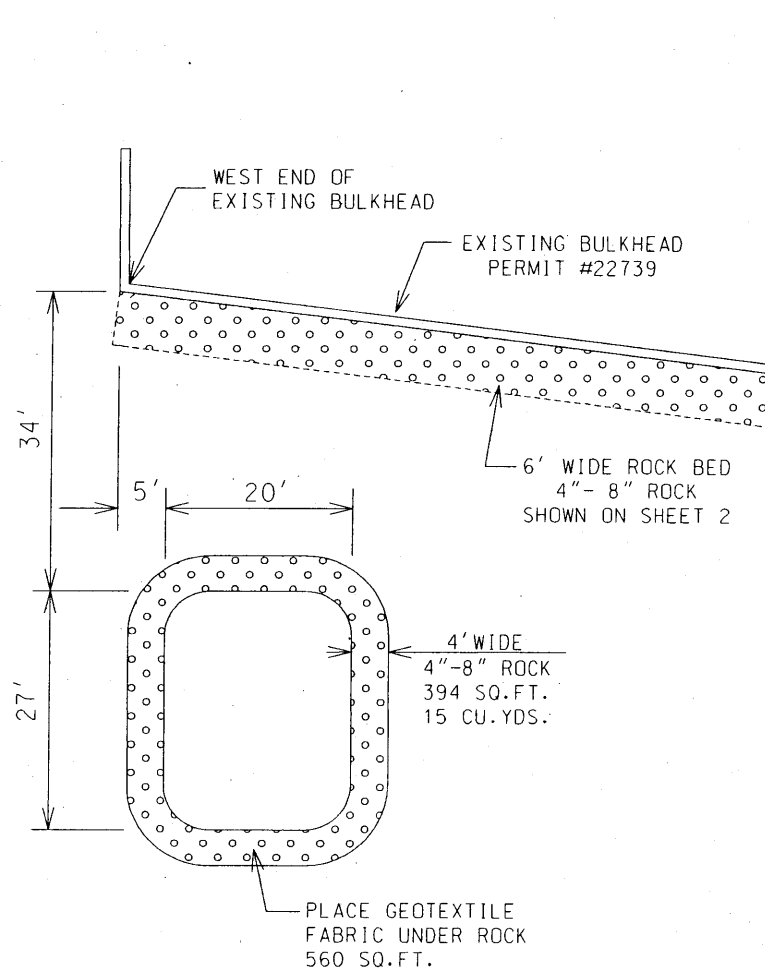
S12734

SCALE: AS SHOWN

SHEET 8 OF 18

EXISTING SEA GRASS PROTECTION PLAN

FIGURE 1



HORIZONTAL
GRAPHIC SCALE IN FEET



Larry's Harbor
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LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

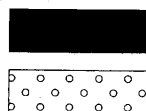
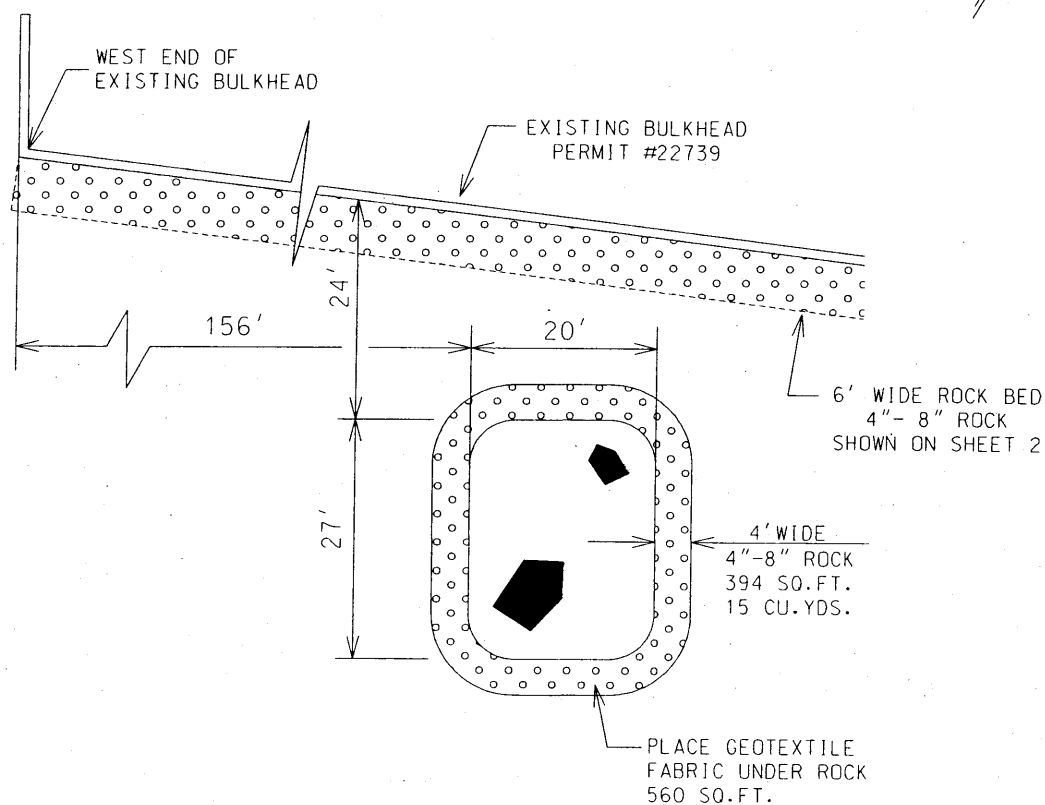
S12734

SCALE: AS SHOWN

SHEET 9 OF 18

EXISTING SEA GRASS PROTECTION PLAN

FIGURE 2



HORIZONTAL
GRAPHIC SCALE IN FEET



Larry's Harbor
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Sheet 10 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

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SCALE: AS SHOWN

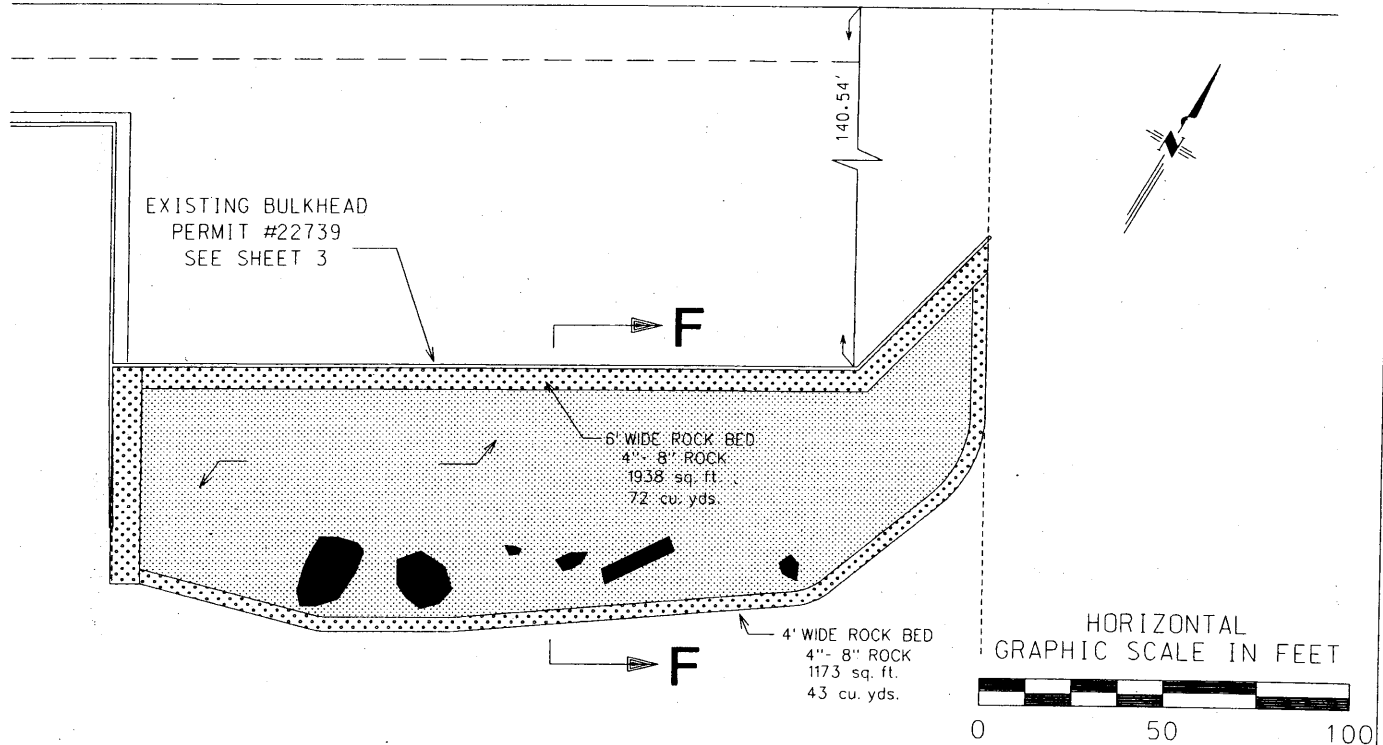
SHEET 10 OF 18

MITIGATION PLAN

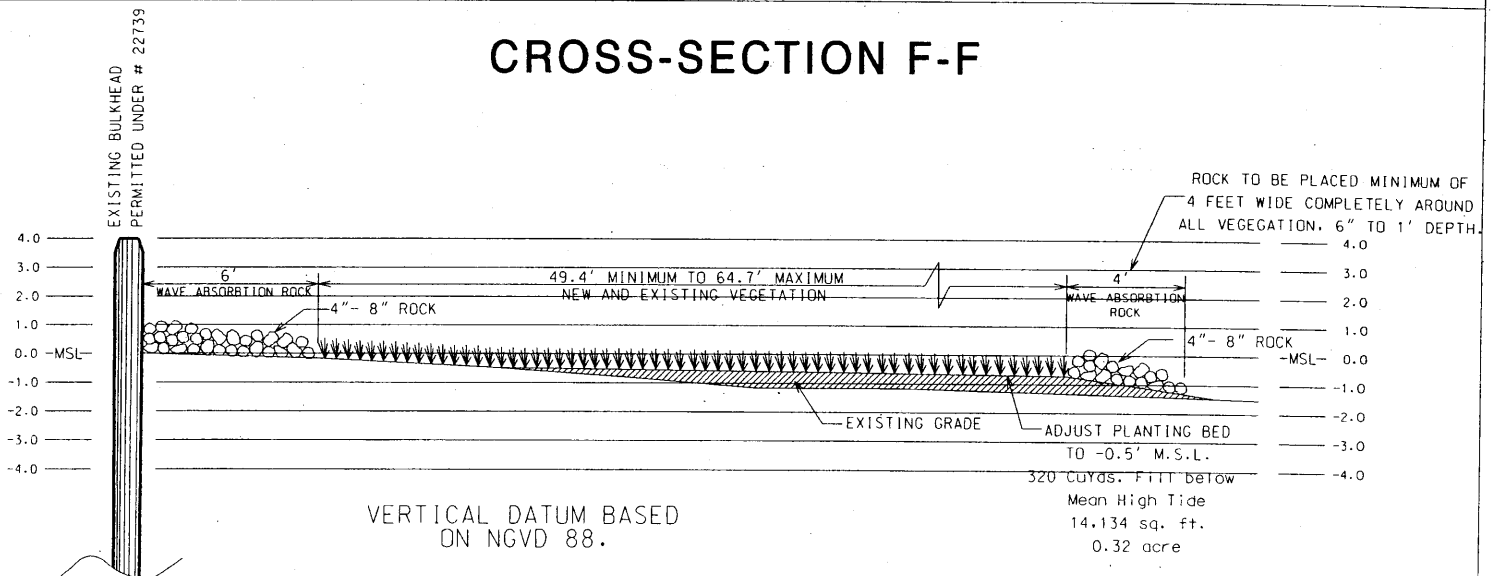
EAST OF BOAT BASIN

FIGURE 3

STELLA AVENUE (40' R.O.W.)



CROSS-SECTION F-F



HORIZONTAL & VERTICAL
GRAPHIC SCALE IN FEET



Larry's Harbor
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Sheet 11 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

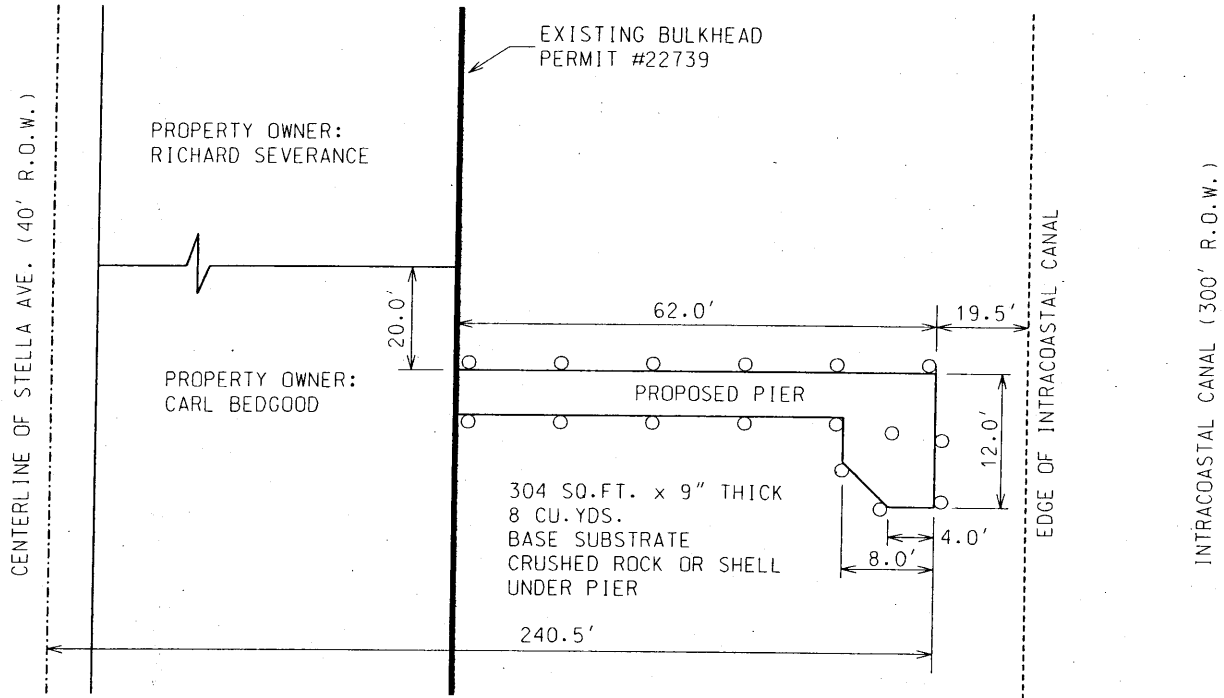
DATE: JANUARY 30, 2004

S12734

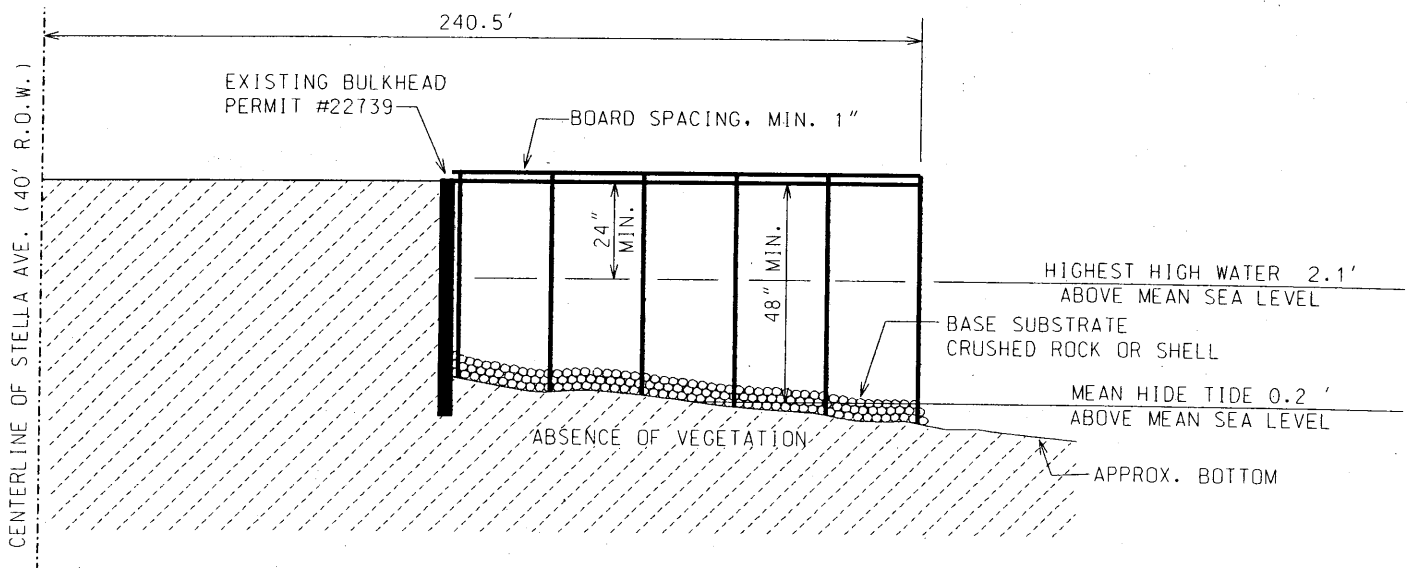
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SHEET 11 OF 18

PLAN VIEW OF PIER AND L-HEAD



CROSS SECTION OF PROPOSED PIER



Larry's Harbor
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Sheet 12 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

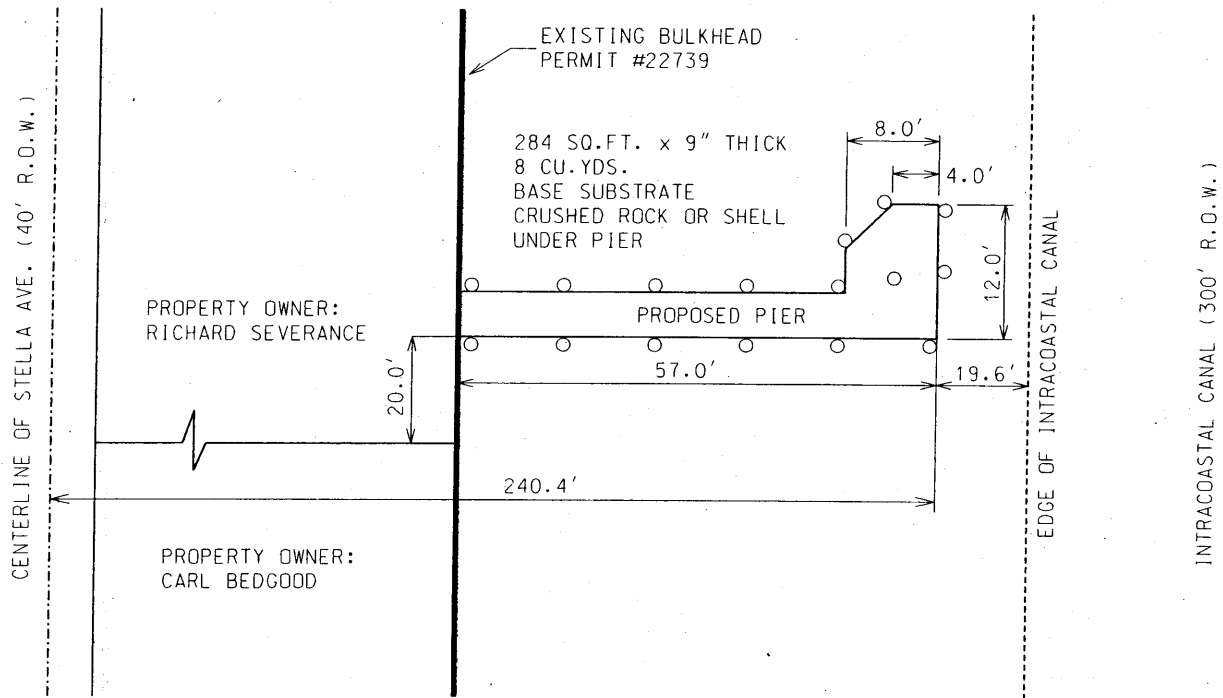
DATE: JANUARY 30, 2004

S12734

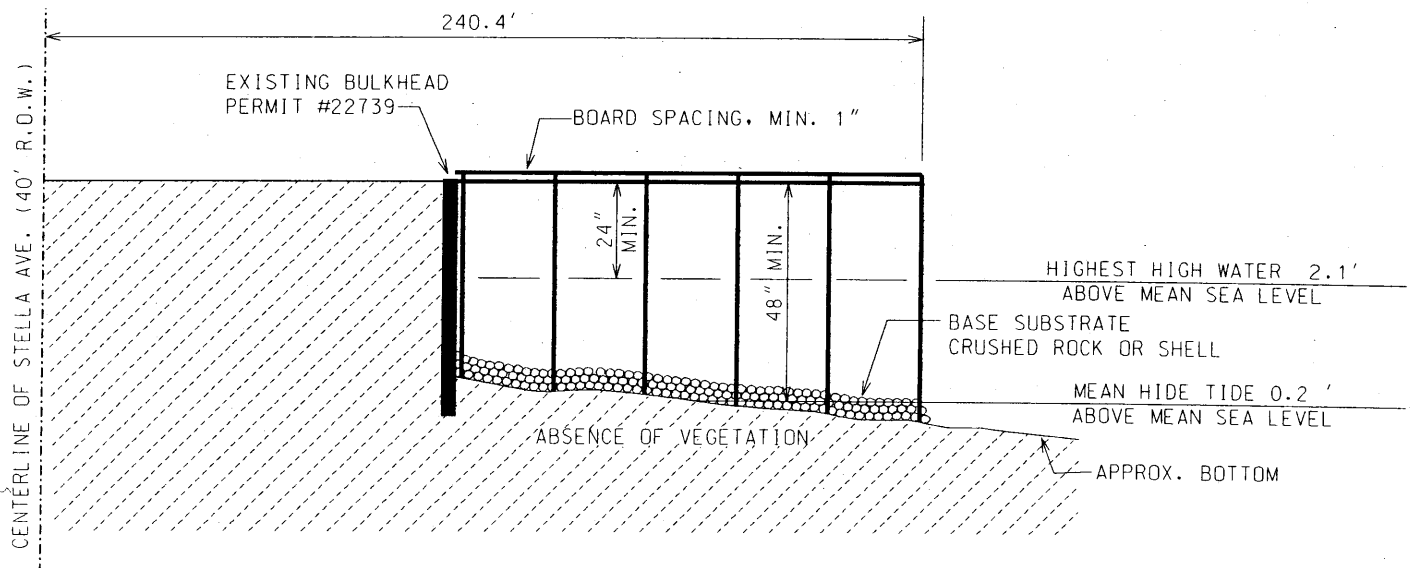
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SHEET 12 OF 18

PLAN VIEW OF PIER AND L-HEAD



CROSS SECTION OF PROPOSED PIER



Larry's Harbor
22739(01)
Sheet 13 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

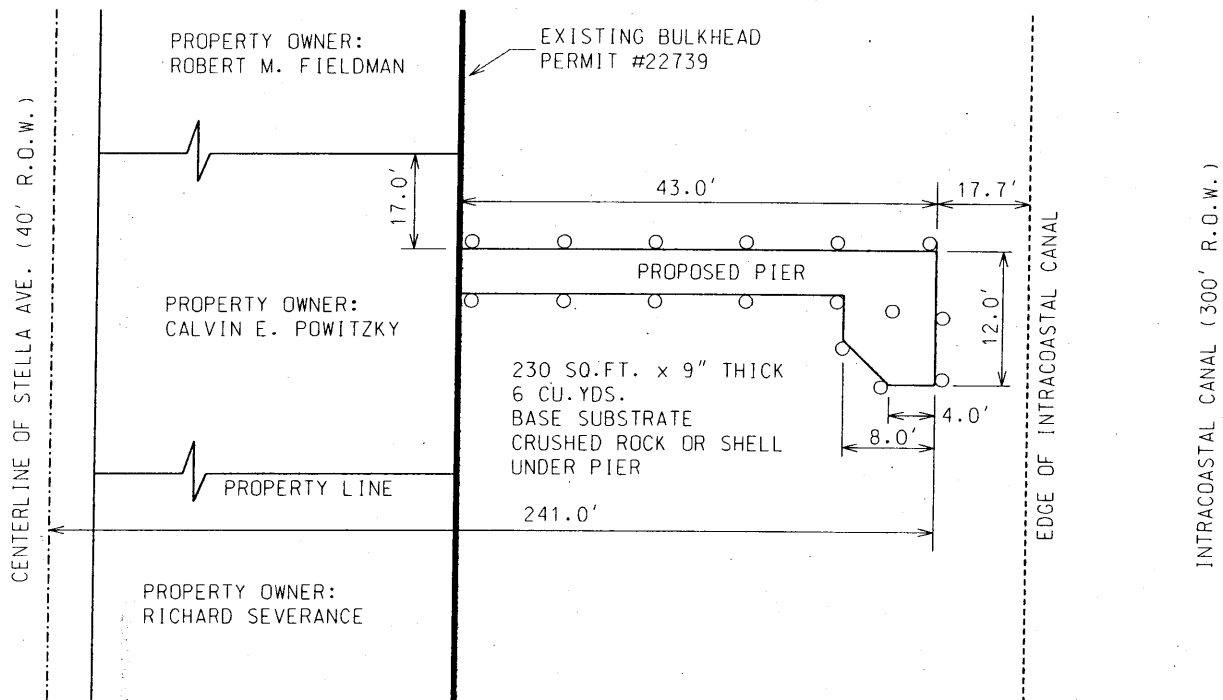
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S12734

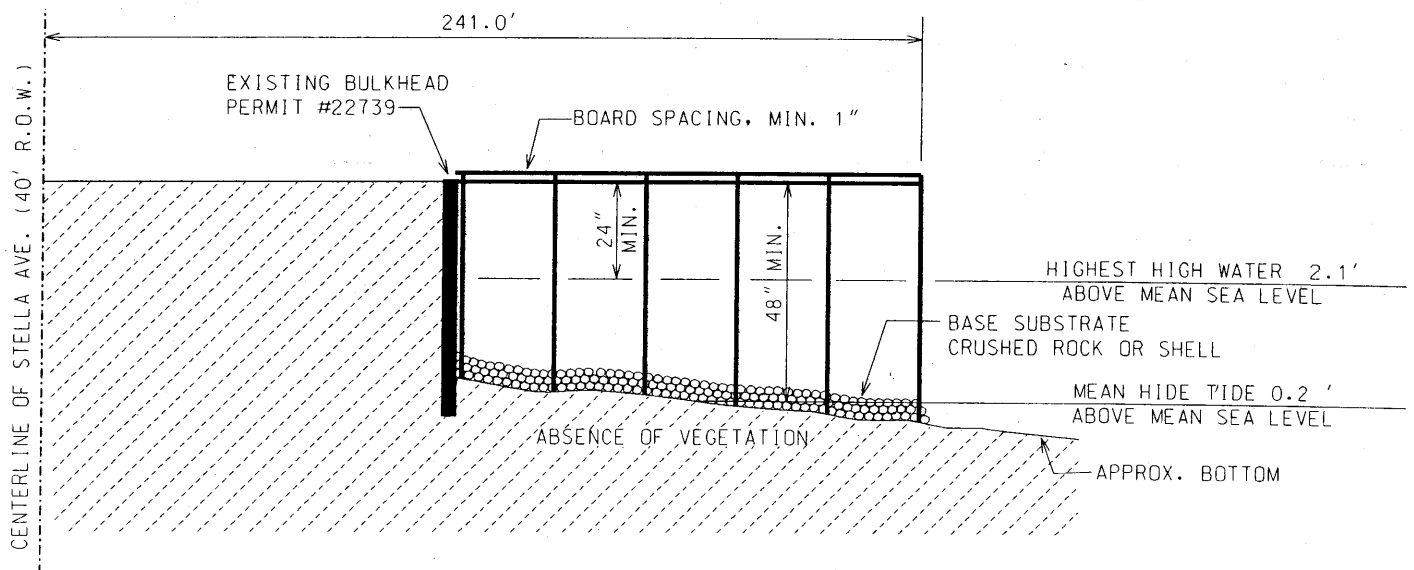
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SHEET 13 OF 18

PLAN VIEW OF PIER AND L-HEAD



CROSS SECTION OF PROPOSED PIER



Larry's Harbor
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Sheet 14 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

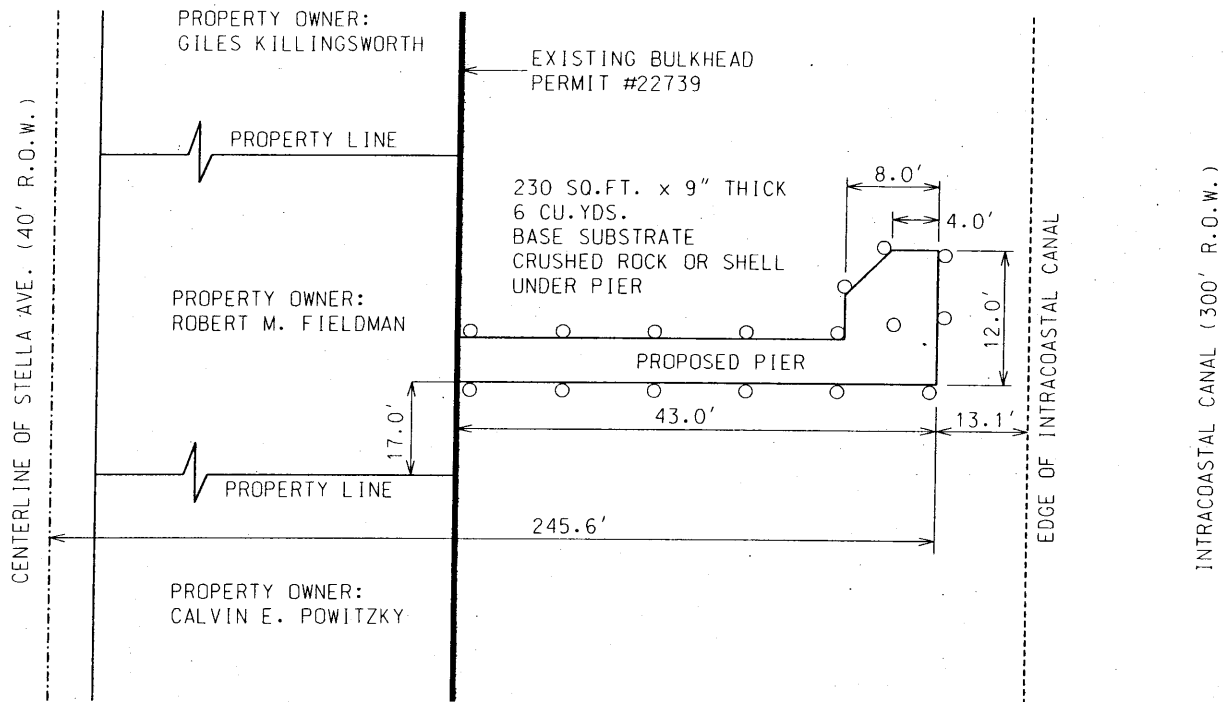
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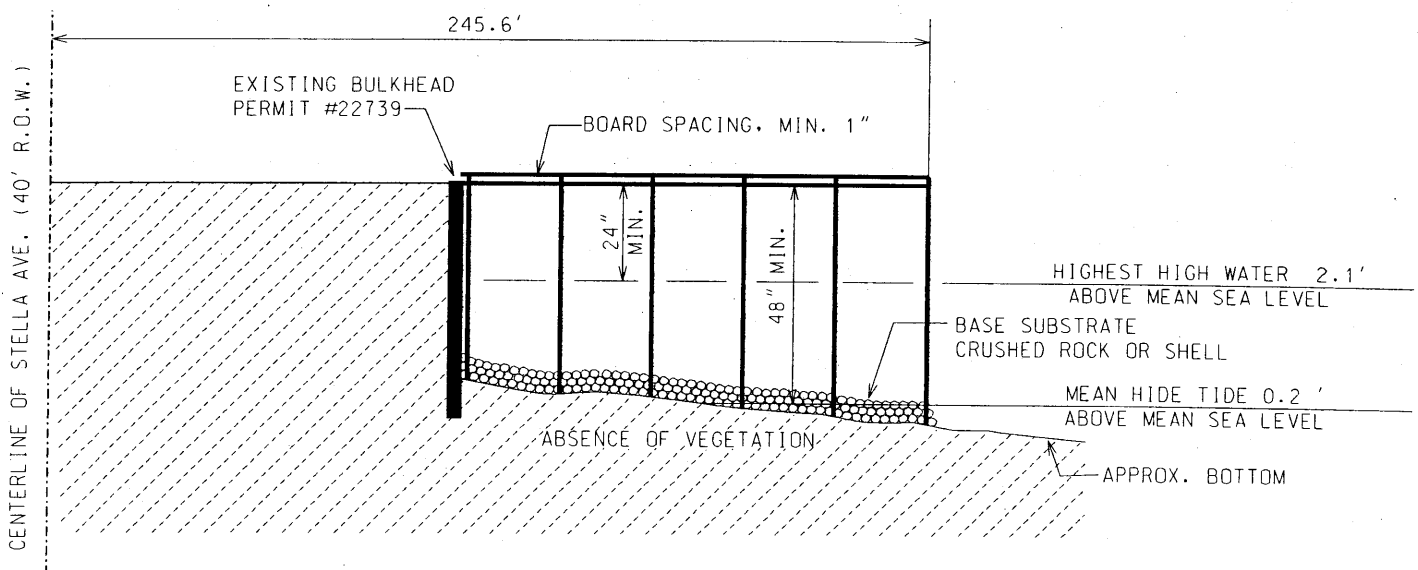
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SHEET 14 OF 18

PLAN VIEW OF PIER AND L-HEAD



CROSS SECTION OF PROPOSED PIER



Larry's Harbor
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Sheet 15 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

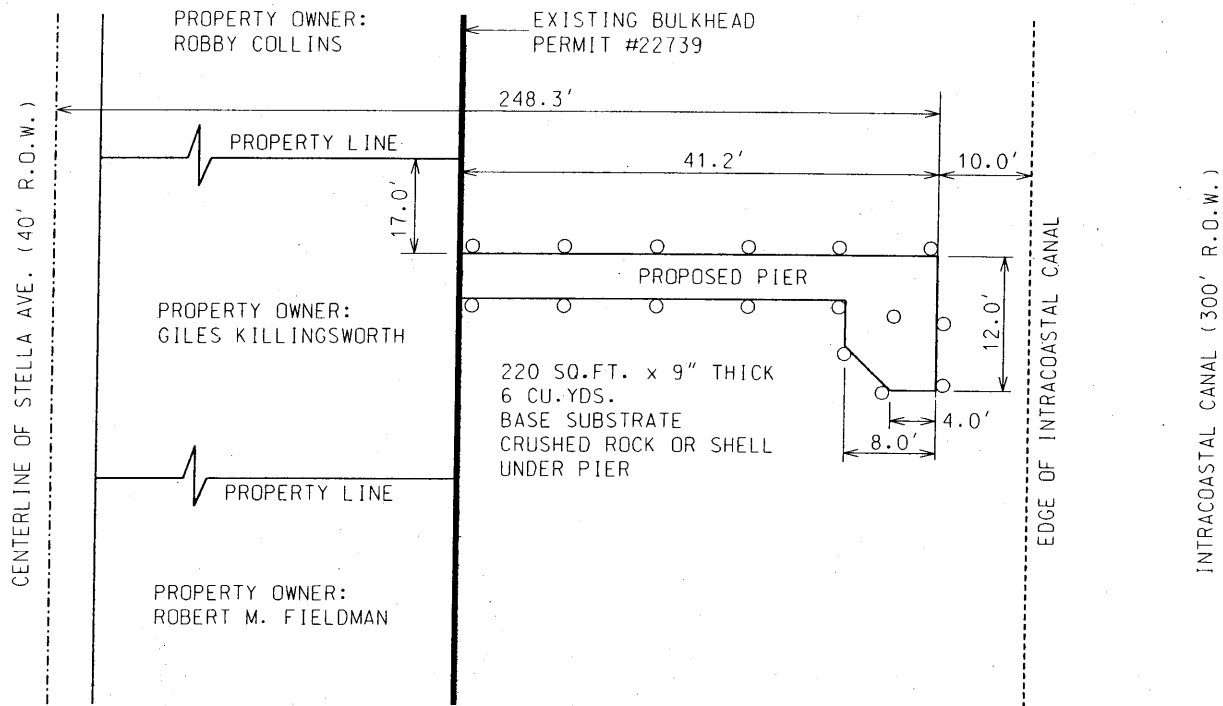
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S12734

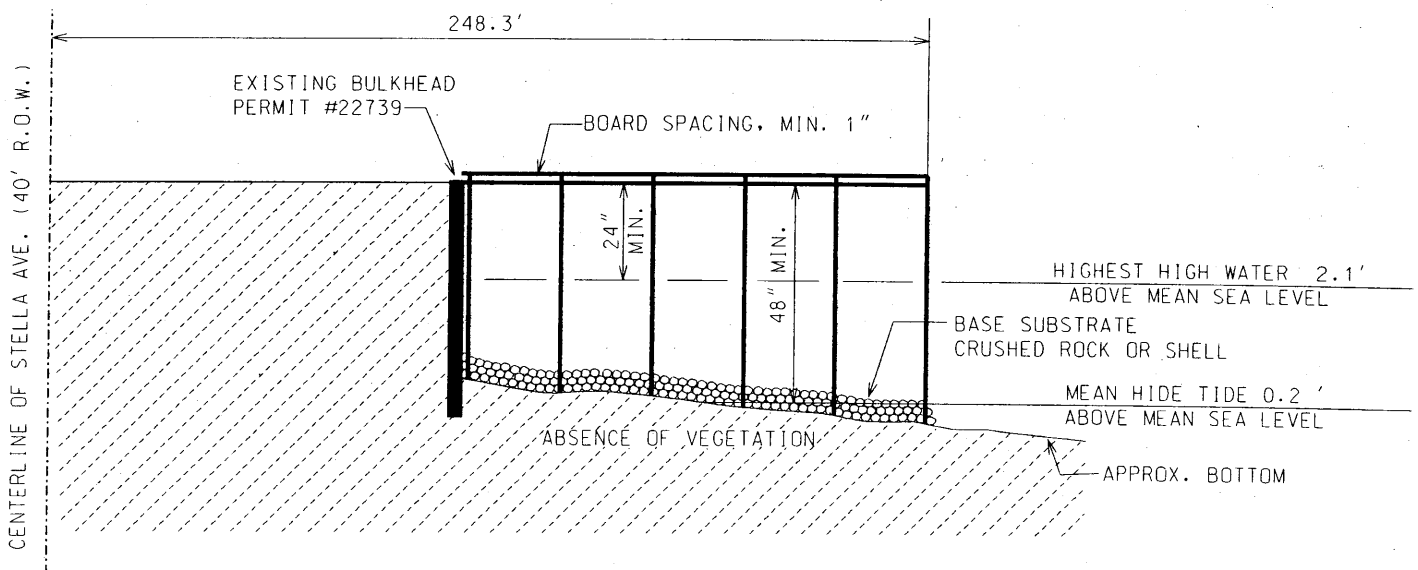
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SHEET 15 OF 18

PLAN VIEW OF PIER AND L-HEAD



CROSS SECTION OF PROPOSED PIER



Larry's Harbor
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Sheet 16 of 18

LARRY'S HARBOR
BOAT BASIN PROJECT

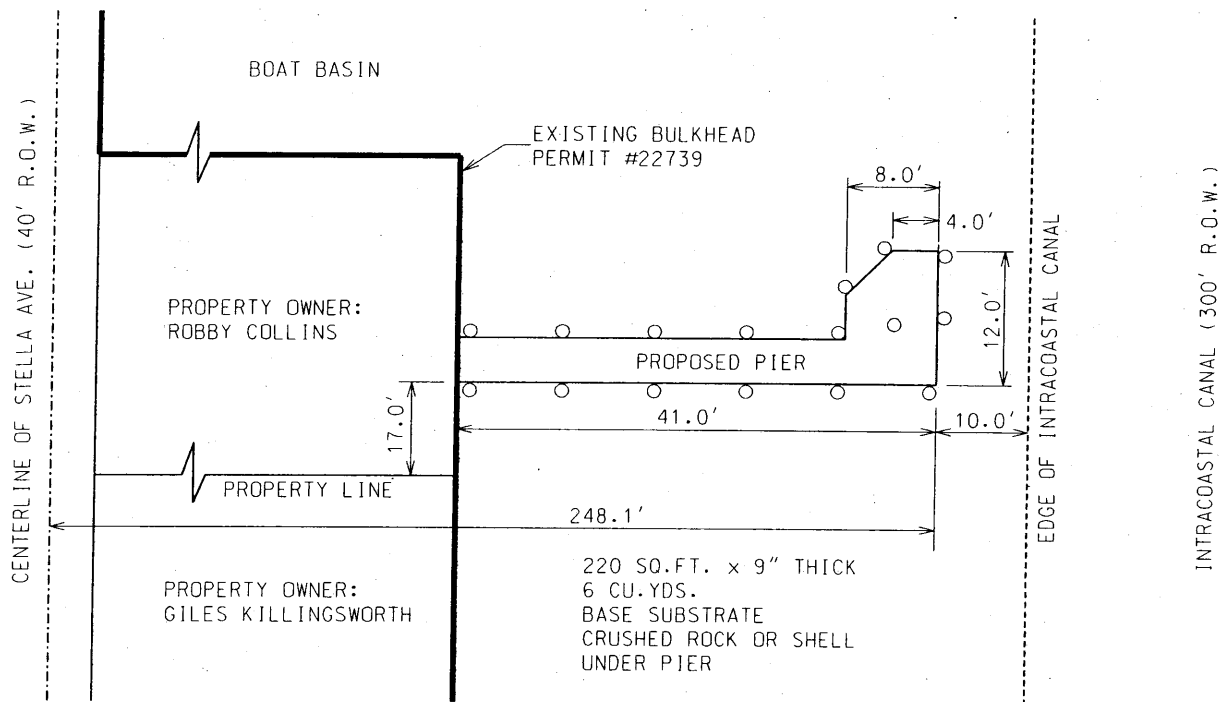
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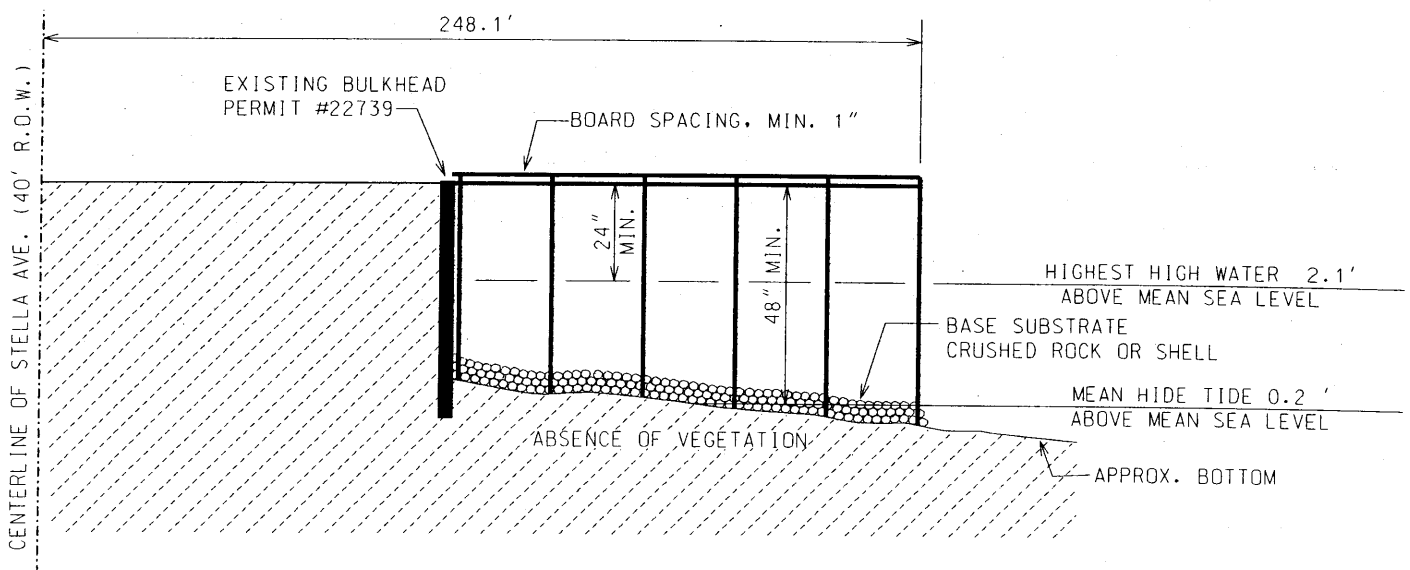
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SHEET 16 OF 18

PLAN VIEW OF PIER AND L-HEAD



CROSS SECTION OF PROPOSED PIER



Larry's Harbor
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LARRY'S HARBOR
BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

S12734

SCALE: NOT TO SCALE

SHEET 17 OF 18

QUANTITY SUMMARY

VINYL BULKHEAD - AS BUILT (SEE SHEET 3)..... 1252.9 LINEAR FEET

CUBIC YARDS DREDGE FROM BOAT BASIN (SEE SHEET 4)..... 8319 CUBIC YARDS

CUBIC YARDS FILL:

WEST OF BOAT BASIN (SEE SHEET 7)..... 625 CUBIC YARDS ABOVE MEAN HIGH TIDE

25 CUBIC YARDS BELOW MEAN HIGH TIDE

EAST OF BOAT BASIN (SEE SHEET 8)..... 298 CUBIC YARDS ABOVE MEAN HIGH TIDE

13 CUBIC YARDS BELOW MEAN HIGH TIDE

MITIGATION AREA (SEE SHEET 11).....320 CUBIC YARDS BELOW MEAN HIGH TIDE

1281 CUBIC YARDS FILL (0.55 ACRE)

4" - 8" ROCK:

WEST OF BOAT BASIN (SEE SHEET 2)..... 93 CUBIC YARDS

EAST OF BOAT BASIN (SEE SHEET 2)..... 72 CUBIC YARDS

UNDER PIER EAST OF BOAT BASIN (SEE SHEET 4).....18 CUBIC YARDS

AROUND EXISTING VEGETATION (SEE SHEET 9).....15 CUBIC YARDS

AROUND EXISTING VEGETATION (SEE SHEET 10).....15 CUBIC YARDS

AROUND MITIGATION AREA (SEE SHEET 11)..... 43 CUBIC YARDS

256 CUBIC YARDS FILL (0.14 ACRE)

BASE SUBSTRATE (CRUSHED ROCK OR SHELL)

UNDER BOAT BASIN PIER (SEE SHEET 4)..... 48 CUBIC YARDS

UNDER L-HEAD PIER (SEE SHEET 12)..... 8 CUBIC YARDS

UNDER L-HEAD PIER (SEE SHEET 13)..... 8 CUBIC YARDS

UNDER L-HEAD PIER (SEE SHEET 14)..... 6 CUBIC YARDS

UNDER L-HEAD PIER (SEE SHEET 15)..... 6 CUBIC YARDS

UNDER L-HEAD PIER (SEE SHEET 16)..... 6 CUBIC YARDS

UNDER L-HEAD PIER (SEE SHEET 17)..... 6 CUBIC YARDS

88 CUBIC YARDS FILL (0.07 ACRE)

MITIGATION AREA NEW SMOOTH CORD GRASS (SEE SHEET 11)... 12400 SQUARE FEET (0.28 ACRE)

Larry's Harbor
22739(01)
Sheet 18 of 18

LARRY'S HARBOR BOAT BASIN PROJECT

DATE: JANUARY 30, 2004

S12734

SCALE: NO SCALE

SHEET 18 OF 18

MITIGATION PLAN

PLAN OF DEVELOPMENT

The permittee will create a 0.28-acre emergent intertidal wetland and install 0.21 acre of submerged hard substrate materials that will function as submerged habitat and wave absorption buffers for both the existing seagrass beds and the created intertidal wetland, (as shown on Sheets 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 & 18 attached hereto). In addition to the transplant and propagation actions, the applicant will install an 4-foot-wide submerged layer of rock 4 to 8 inches in diameter buffer around neighboring seagrass beds not within the transplant area to alleviate further loss of existing beds due to hydrologic forces, install a 4-foot-wide line of 8-to12- inch-diameter wave absorption rock between the created intertidal wetland and the GIWW to prevent future erosion of the transplanted grass, and install a 6-foot-wide line of 8-to12- inch-diameter wave absorption rock in front of the bulkhead to prevent future erosion of the mitigation area. A 8 foot-wide single layer of 4-to 6- inch-diameter hard substrate material will installed as submerged habitat both walkway piers in the basin and a 4 foot-wide single layer of 4-to 6- inch-diameter hard substrate material will installed as submerged habitat under each of the L-head piers. (See Sheets 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 & 18 attached hereto) The applicant will obtain all necessary state permits for transplanting smooth cordgrass from the Texas Parks and Wildlife Department and/or other state agencies as required.

EMERGENT WETLAND CREATION

A planting bed totaling approximately 0.28 acre will be created in front of the property bulkheads in Section C- C Sheet 8 at a stabilized elevation -1.25 to 0.75 feet above mean sea level (MSL) using the excavated soils located in the northwest corner of the basin which are sands and loamy sands with some organic content. Once the planning bed has been constructed sediment the sediment will be allowed to stabilize for at least 60 days prior to planting. Once the stabilized bed elevation is established, the rock wavebreak fronting this bed and bulkhead will be completed. When the bedded soils have settled and no additional materials are required to achieve the proposed elevation, smooth cordgrass springs will be hand-planting in the newly established bed on 3 foot by 1.5 foot centers throughout the lengths of the bed. Wetland creation activities will occur from April through September 2004. The Permittee will place restrictions on the 0.28-acre emergent intertidal wetland area in the form of the attached Deed Restrictions.

MONITORING

Created Cordgrass Portion of the Mitigation

1. All construction of mitigation, including planting, must be complete within 12 months after start of construction within jurisdictional areas. **The permittee will notify the U.S. Army Corps of Engineers, Galveston District, Regulatory Branch, Chief,**

Compliance Section (Corps) in writing when the work begins in jurisdictional areas.
Monitoring and maintenance will proceed according to the mitigation plan.

2. The mitigation success criteria, as indicated in the mitigation plan included in **Attachment 1** must be achieved for the mitigation requirement to be considered complete.
3. The permittee will notify the Corps in writing within 2 weeks of completion of initial planting.
4. A transplant survival survey of the planted mitigation area must be performed 45-60 calendar days after the initial planting effort. If at least 50% survival of transplants is not achieved within 45-60 calendar days of planting, a second planting effort will be completed within 60 calendar days of completing the initial survival survey. If optimal seasonal requirements for re-planting targeted species is not suitable when replanting would be required, the Corps must approve a re-planting schedule.
5. Written reports detailing plant survival must be submitted to the Corps within 30 calendar days of completing the initial survival survey and any subsequent replanting effort.
6. If after one year from the initial planting effort (or subsequent planting efforts) the site does not have at least 35% areal coverage of targeted vegetation, those areas that are not vegetated will be replanted using the original planting specifications.
7. If after three years from the initial planting effort (or subsequent planting efforts) the site does not have at least 70% areal coverage of targeted vegetation, those areas that are not vegetated will be replanted using the original planting specifications.
8. In addition to the initial survival report, progress reports will be submitted to the Corps at 6 months, 1 year, 2 year, and 3-year intervals following the initial transplanting effort or subsequent replanting efforts. Photos of the mitigation site will be included.
9. Should mitigation be determined to be unsuccessful by Corps personnel at the end of the monitoring period, the permittee will be required to take necessary corrective measures, as approved by the Corps. Once the corrective measures are completed, the permittee will notify the Corps and a determination will be made regarding success of the mitigation. If unsuccessful, additional attempts will be conducted until success is achieved.
10. Once the mitigation site is deemed to meet minimum success criteria the Corps will be notified in writing within 30 days stating the mitigation site has reached minimum success criteria.
11. Once the Corps concurs that the mitigation site has reached minimum success written verification of the permanent deed restriction must be submitted to the Corps within 60 days of the Corps concurrence. The permittee must use a Corp approved Deed Restriction instrument to permanently deed restrict the created cordgrass wetland mitigation site and protect the site in perpetuity.

Substrate Portion of Mitigation

1. The permittee will supply written notification to the Corps two weeks prior to the construction/installation of the substrate. This notification will include the date the work is expected to begin, a construction timeline, and contact information of the site supervisor.
2. The permittee will supply written notification to the Corps two weeks after completion of the construction/installation of the substrate. This notification will serve as confirmation that that portion of the project is complete within jurisdictional areas authorized under this permit.